AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph at page 1, line 16, with the following rewritten paragraph:

An optical head is constructed by mounting various optical components, such as a light source, a photodetector, a half mirror and lenses, on a given frame. These optical components are required to be accurately mounted in their ~~right~~ correct positions without causing the displacement in optical axis and focal position.

Please replace the paragraph at page 2, line 10, with the following rewritten paragraph:

The inner surface of the lens frame 124 is formed with a projecting surface 124b having a ring shape arranged rotationally symmetrically with respect to the optical axis O. In an operation of holding the collimator lens 113 within the lens frame 124, an adhesive 116 is applied onto the projecting surface 124b, and one 113b of the lens surfaces of the collimator lens 113 is brought into contact with the projecting surface 124b and fixedly held by the adhesive 116, so that the collimator lens 113 is positioned in the optical axis direction.

Please replace the paragraph at page 3, line 18, with the following rewritten paragraph:

The optical head is required to assure an adequate operation under the wide circumstance from a high temperature to a low temperature. In particular, there is a strong need for an excellent temperature characteristic in which a light to be detected is not affected by an optical-axis displacement arising from the relative displacement between a laser light source and the collimator lens 113. Specifically, if the relative displacement between a laser-emitting point and the collimator lens 113 is ~~cause~~ caused by the expansion of the collimator lens 113, the lens frame 124 holding the collimator lens 113, and/or an outer frame for holding the lens frame 124, due to the change of atmospheric temperature, a resulting optical-axis displacement will be likely to cause the displacement of a detected-light spot in a detector. Therefore, it is desired to provide an

optical head capable of achieving an excellent temperature characteristic even under unstable atmospheric temperature.

Please replace the paragraph at page 4, line 16, with the following rewritten paragraph:

In order to achieve the above object, the present invention provides an optical head comprising a laser light source, a collimator lens for converting a beam emitted from the laser light source into a parallel beam, a lens frame holding the collimator lens, a beam shaping device for shaping the parallel beam passing through the collimator lens, an objective lens for converging the parallel beam passing through the beam shaping device on an optical recording medium formed with a track, and a photodetector for detecting a reflected light or transmitted light from the optical recording medium. In this optical head, the lens frame is designed to hold the collimator lens in such a manner that a straight line extending in a radial direction of the parallel beam having the largest ratio of the diameter of the parallel beam outgoing from the beam shaping device to the diameter of the parallel beam incoming into the beam shaping device at an entrance surface is located on the same plane together with a straight line extending in a direction along the displacement in a radial direction of the collimator lens.

Please replace the paragraph at page 5, line 5, with the following rewritten paragraph:

In the above optical head, the beam shaping device may be designed to shape a parallel beam having an elliptic cross-section into a parallel beam having a circular cross-section. In this case, the lens frame may be designed to hold the collimator lens in such a manner that a straight line extending in the minor axis of the ~~elliptic~~ elliptical cross-section of the parallel beam incoming into the beam shaping device at an entrance surface is located on the same plane together with a straight line extending in a direction along the displacement in said radial direction of the collimator lens.

Please replace the paragraph at page 5, line 27, with the following rewritten paragraph:

The above optical head may include an outer frame holding the lens frame. The outer frame has an inner peripheral surface formed with a cross-sectionally V-shaped portion. Further, the outer frame is arranged such that the apex of the V-shaped portion is located on a straight line that crosses the optical axis of the collimator lens at a right angle and extends in the radial direction. In this case, the lens frame may be in contact with the inner peripheral surface of the outer frame at two ~~position~~ positions located on both sides of the apex of the V-shaped portion and symmetrically with respect to the straight line, and the outer frame may also be provided with a presser member for pressing the lens frame in the radial direction.

Please replace the paragraph at page 6, line 6, with the following rewritten paragraph:

In the above structure, the lens frame may be made of a material having ~~an~~ approximately the same linear expansion coefficient as that of the collimator lens.

Please replace the paragraph at page 6, line 26, with the following rewritten paragraph:

As above, according to the optical head and the optical recording medium drive of the present invention, the lens frame holds the collimator lens in such a manner that a straight line extending in a direction of the parallel beam incoming into the beam shaping device having ~~said~~ the largest ratio at an entrance surface of the beam shaping device is located on the same plane together with the displacement direction of the collimator lens. Thus, the displacement of the detected-light spot can be minimized. Further, information can be accurately recorded or reproduced under even unstable atmospheric temperature to assure an adequate operation under the wide circumstance from a high temperature to a low temperature.

Please replace the paragraph at page 8, line 14, with the following rewritten paragraph:

The beam shaping prism 3 is capable of shaping the parallel beam from the cross-sectionally elliptic shape into a cross-sectionally circular shape to provide ~~an~~ a uniform light-intensity distribution in its circumferential direction. Thereinafter, a parallel beam entering into the beam shaping prism 3 will be referred to as "incoming beam", and a parallel beam getting out of the beam shaping prism 3 will be referred to as "outgoing beam". When the incoming parallel beam is shaped to allow the outgoing parallel beam to have a cross-sectionally circular shape, the ~~elliptic~~ elliptical cross section of the incoming parallel beam may be narrowed in the major axis, or may be extended in the minor axis.

Please replace the paragraph at page 8, line 22, with the following rewritten paragraph:

The outgoing beam is led to the ~~bean~~ beam splitter 4. The beam splitter 4 is capable of splitting frontward and return paths of the parallel beam to be transmitted therethrough. Then, the outgoing beam passing through the beam splitter 4 is converged on an optical disk 6 serving as an optical recording medium through the objective lens 5. A reflected light from the optical disk 6 passes through the objective lens 5 again. Then, the light is reflected by the beam splitter 4 for splitting forward/return paths, and converged through the detection lens 7 to enter into the photodetector 8.

Please replace the paragraph at page 9, line 10, with the following rewritten paragraph:

As shown in FIG. 2, the semiconductor laser 1 is held by a laser plate 11 ~~through~~ via a leaf spring 12. The leaf spring 12 presses the semiconductor leaser 1 to the laser plate 11 in the optical axis. The lens frame 21 is held by an outer frame 20 in such a manner that it is movable in the optical axis direction.

Please replace the paragraph at page 9, line 27, with the following rewritten paragraph:

An acrylic-based adhesive is used as the adhesives 22, 23. The applied amount of each of the adhesives 22, 23 is set in the range of 0.05 to 1.1 %, preferably 0.5 %, of the weight of the collimator lens 2, because. ~~Because~~ a necessary adhesive force cannot be obtained if each of the adhesives 22, 23 is applied at an amount of less than 0.05 % of the weight of the collimator lens 2, and an ineffective excess adhesive will be uselessly applied if the amount of the adhesive is greater than 1.1 %. The applied amount of each of the adhesives 22, 23 in the grooves 21c, 21d is set at the same value as that of each of adhesives which are applied in four positions at 90-degree intervals in a conventional manner. Thus, the total applied amount of the adhesives 22, 23 is reduced as compared to the conventional manner. The applied amount of each of the adhesives 22, 23 is a value before dried (before hardened or cured).

Please replace the paragraph at page 11, line 9, with the following rewritten paragraph:

FIG. 4A shows the respective paths of an incoming beam BI into the beam shaping prism 3, and an outgoing beam BO from the beam shaping prism 3. The beam paths in FIG. 4A are obtained when the collimator lens 2 is arranged in an optimal position. In this state, the incoming beam BI has an elliptic cross section with a diameter in the minor axis direction (short diameter) D_1 and a diameter in the major axis direction (long diameter) D_2 (FIG. 4B), and the outgoing beam has a circular cross section with a diameter D_2 (FIG. 4C).

Please replace the paragraph at page 11, line 15, with the following rewritten paragraph:

In FIG. 4(A), given that the refraction index of the beam shaping prism 3 is n, the apex angle of the prism 3 or the refraction angle in an entrance surface being α, the incidence angle of the incoming beam BI being β, and the ratio (beam shaping power) of the diameter D_2 of the outgoing beam to the short diameter D_1 of incoming beam ~~B1~~ BI being K. In this description, the short diameter D_1 is extended, and thus $K > 1$.

Please replace the paragraph at page 13, line 21, with the following rewritten paragraph:

As shown in FIG. 7, when the ~~elliptic~~ elliptical incoming beam BI is shaped to have a circular shape by narrowing the ~~elliptic~~ elliptical shape in the major axis direction, a positional relationship can be figured out by conceiving the travel of the beam reversely in FIGS. 5 and 6. For expediently referring to FIG. 5, given that the long diameter of an incoming beam BI is D2, and the diameter of an outgoing beam BO is D1. In this case, the beam shaping ratio (=D1 / D2) is a positive number of less than 1 (one), and the inclination of the incoming beam BI to the entrance surface and the displacement of the outgoing angle of the outgoing beam BO are θ_4 and δ, respectively. Further, the definition of the beam shaping ratio in this case is reversed relative to the relational expression (2). Thus, differently from the relational expression (16), the following the relational expressions (16) and (17) are satisfied:

$$\delta / \theta_4 = 1 / K \qquad (16)$$

$$\delta = (1 / K)\, \theta_4 \qquad (17)$$

Please replace the paragraph at page 15, line 3, with the following rewritten paragraph:

The optical disk 41 is rotated by the motor 42. The optical head 40 sends a signal corresponding to the positional relationship with the optical disk 41 to a circuit board 43. The circuit board 43 computes the received signal to generate a signal for finely moving the optical head 40 or an objective lens in the optical head 40. The optical head 40 or the objective lens in the optical head 40 performs focus servo and tracking servo to the optical ~~desk~~ disk 41, using a servo mechanism (not shown), and reading/writing/erasing of information to the optical ~~desk~~ disk 41.

Please replace the paragraph at page 15, line 10, with the following rewritten paragraph:

The power source 44 supplies a power to the circuit board 43, the motor 42 or driving mechanism of the optical head 40, and the drive device for the objective lens. Instead of the power supply 44, a connection to an external power source may be

provided. The power source 44 or the connection to an external power may be provided in each of the driving ~~mechanism~~ mechanisms.

Please replace the paragraph at page 15, line 20, with the following rewritten paragraph:

In the second embodiment, while a lens frame 26 is ~~form~~ formed into the same shape as that in the first embodiment, as shown in FIG. 9, it is made of a material having a linear expansion coefficient substantial equal to that of the collimator lens 2, such as ceramic materials.